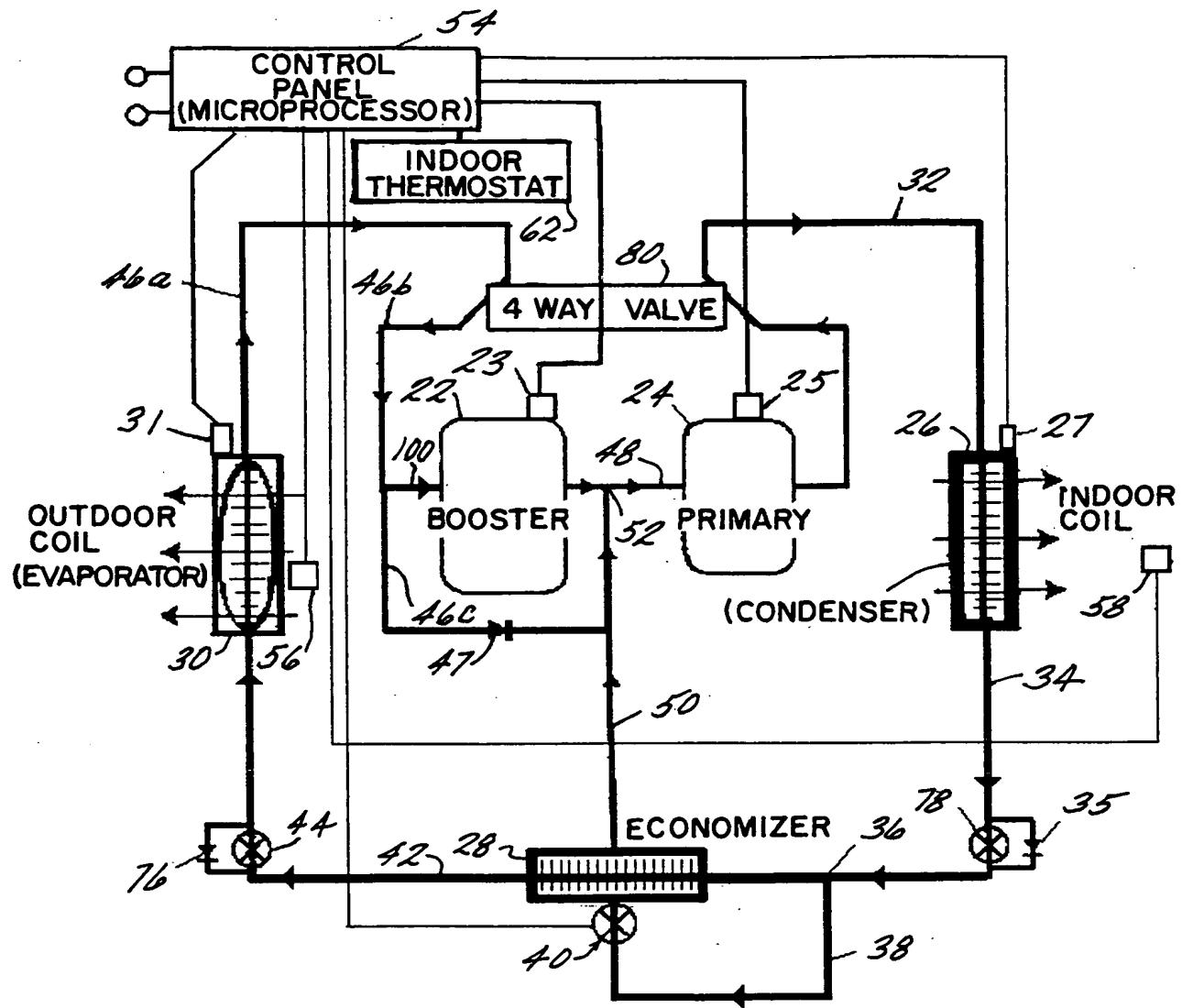


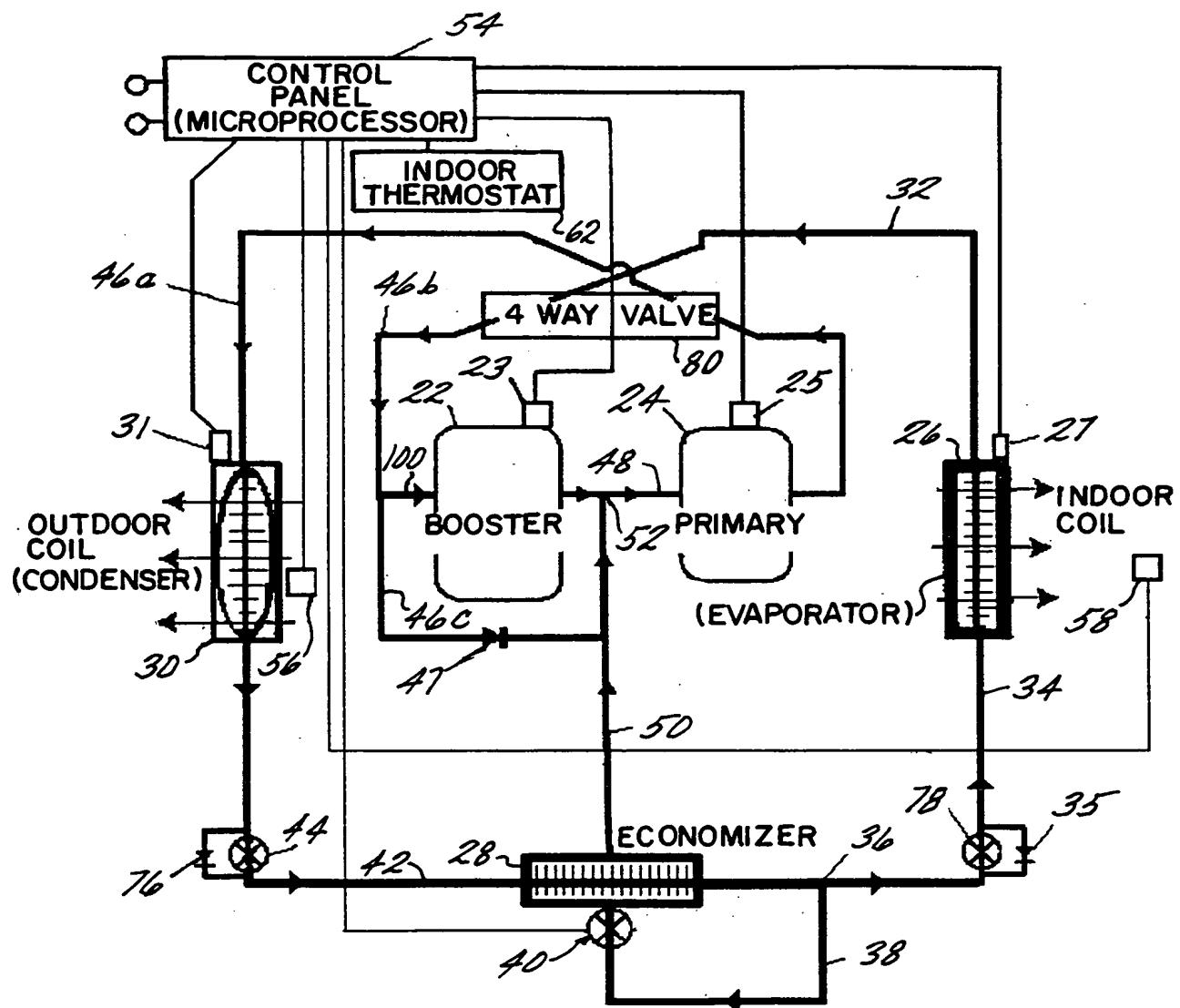
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# HEAT PUMP WITH BOOSTER COMPRESSOR

(HEATING FLOW PATH SHOWN)

FIG. 1



## HEAT PUMP WITH BOOSTER COMPRESSOR

(COOLING FLOW PATH SHOWN)

FIG. 2

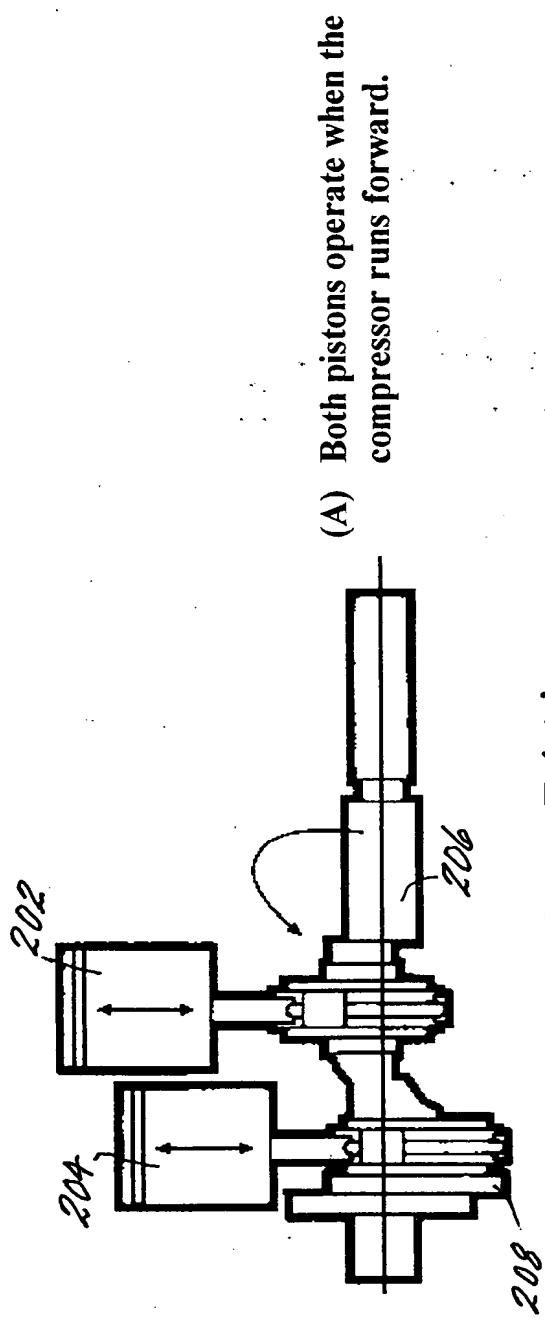


FIG. 3(A)

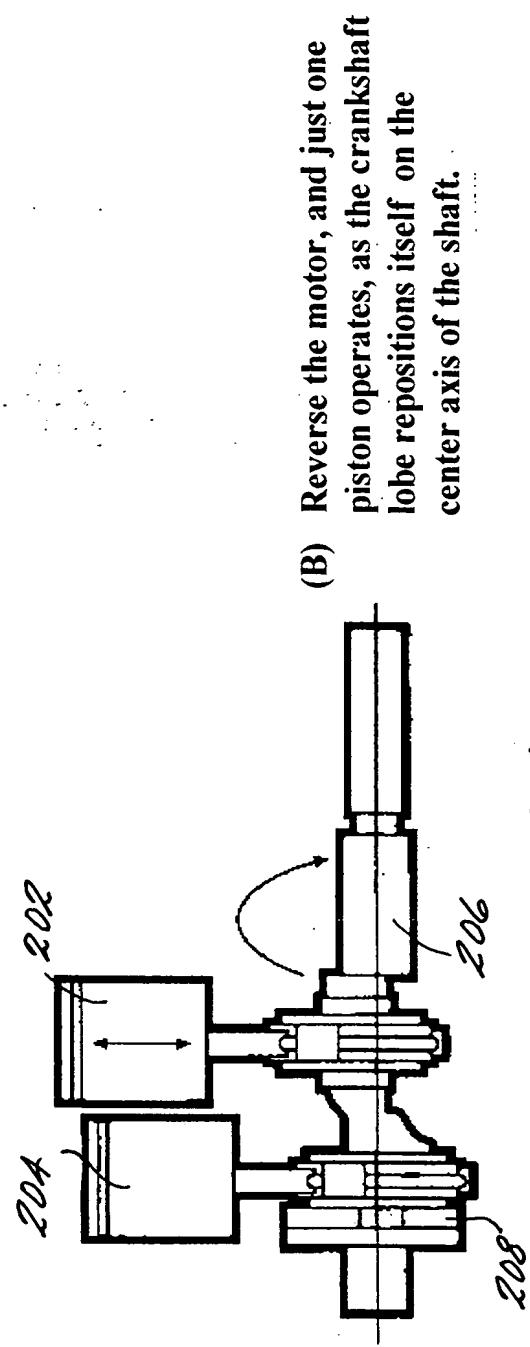
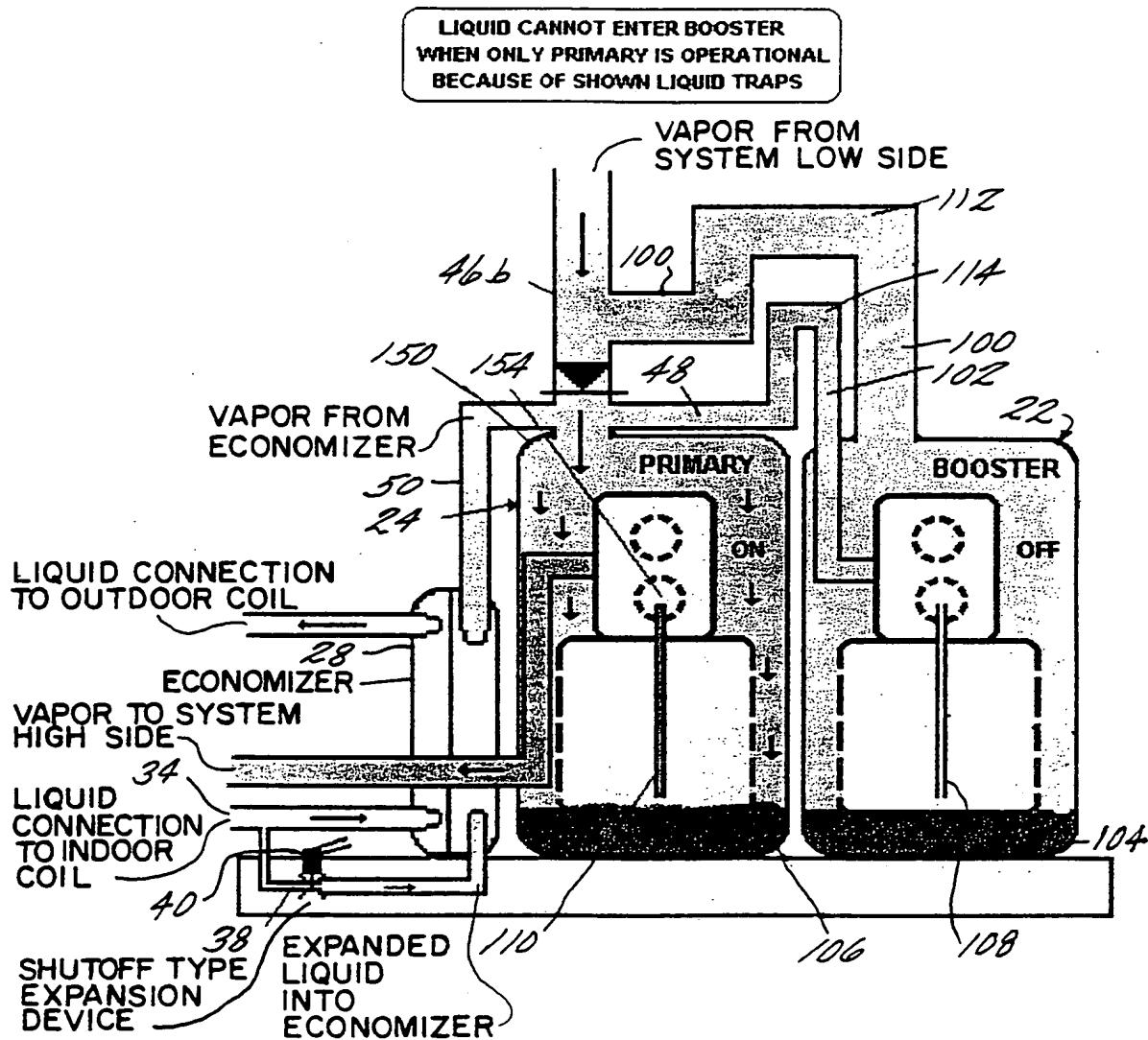


FIG. 3(B)

# COMPRESSION MODULE FOR BOOSTED AIR SOURCE HEATING

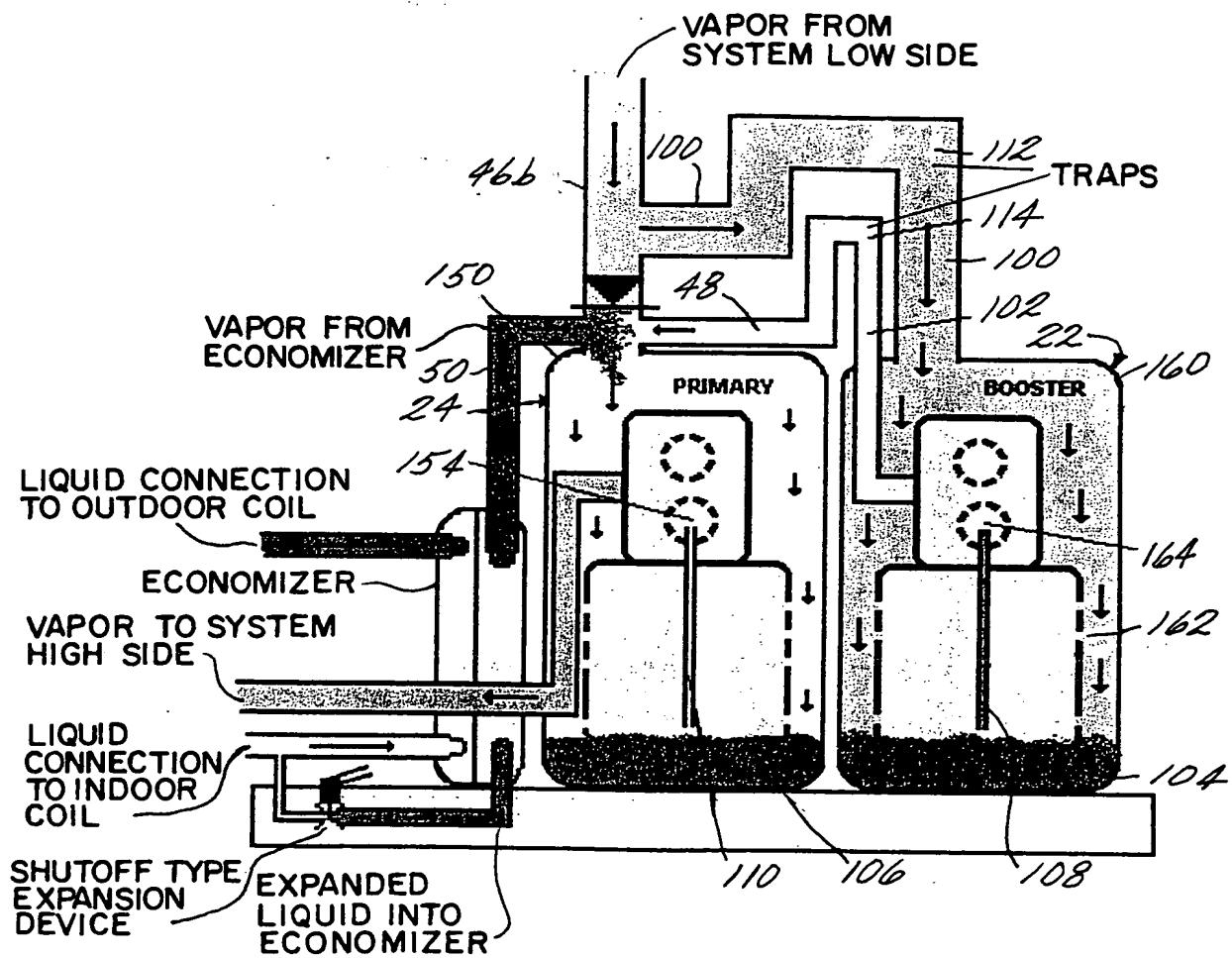


LOW LEVEL HEATING DEPICTED  
ONLY PRIMARY COMPRESSOR OPERATIONAL

LUBRICANT MANAGEMENT

FIG. 4

# COMPRESSION MODULE FOR BOOSTED AIR SOURCE HEATING



HIGH HEATING DEPICTED  
BOTH COMPRESSORS OPERATIONAL

LUBRICANT MANAGEMENT

FIG. 5

BSHP-30 HEATING CAPACITY, BTU'S PER HOUR

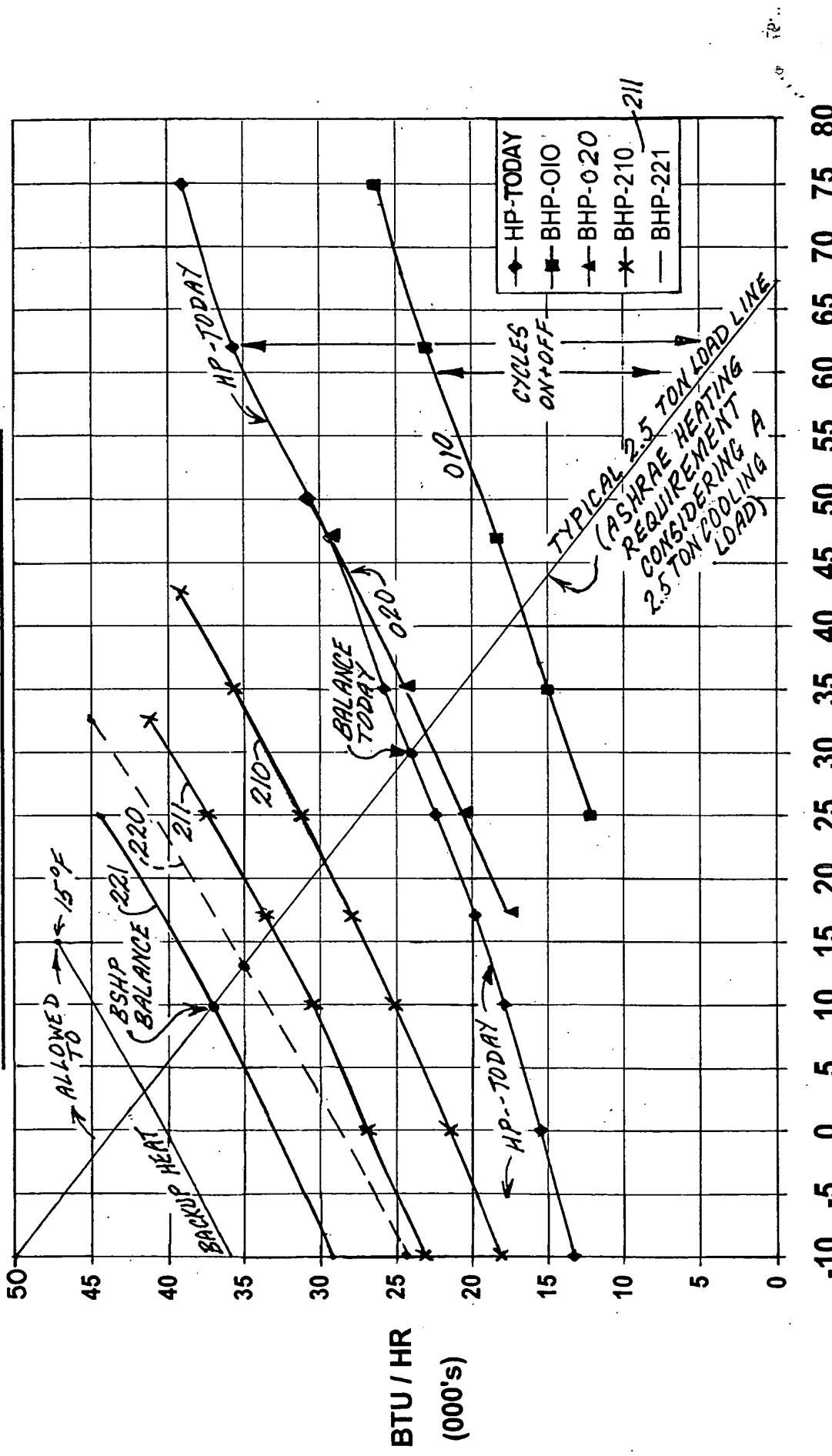


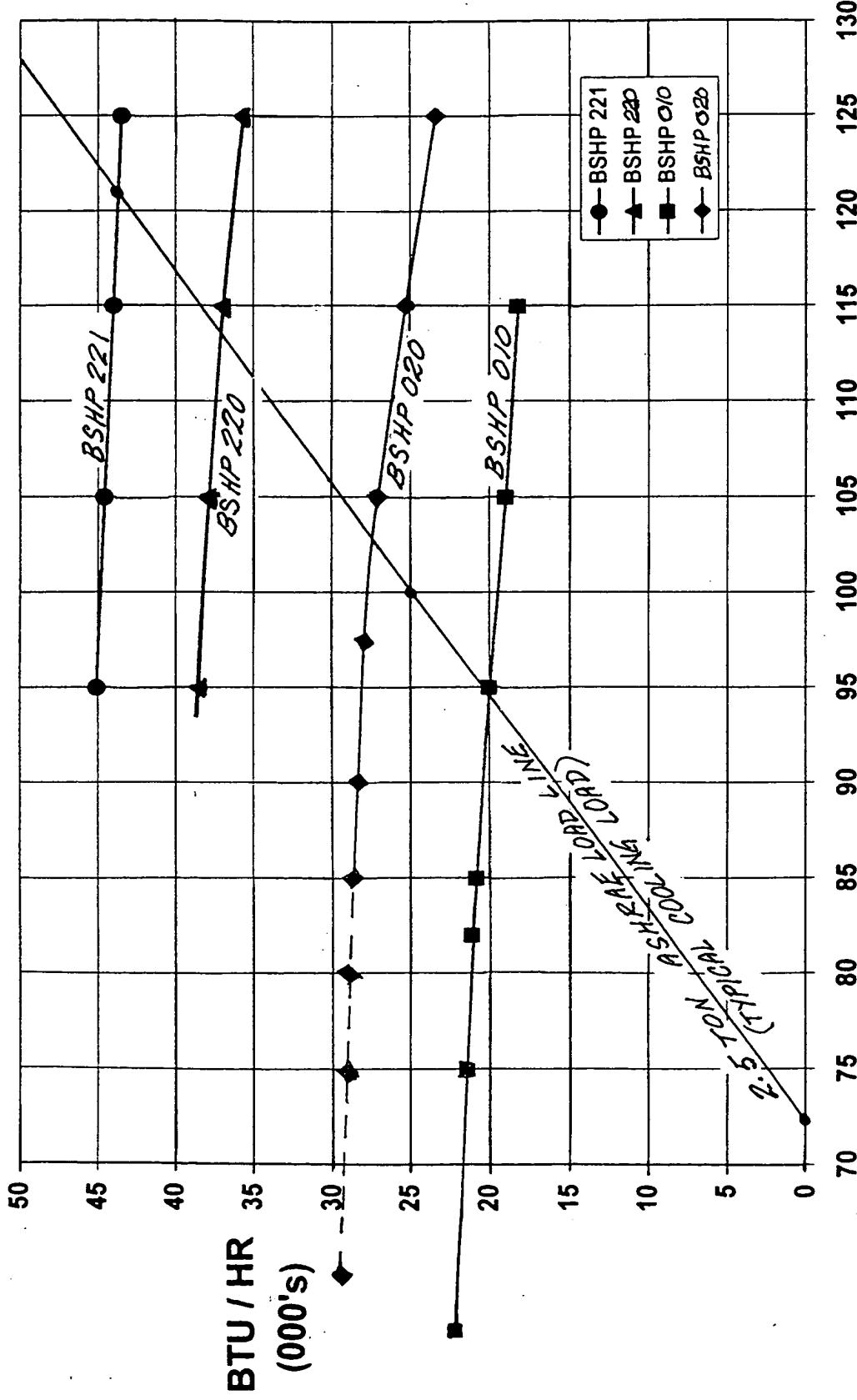
FIG. 6

OUTDOORS,  $F^\circ$

BOOSTED AIR SOURCE HEAT PUMP TYPICAL OPERATING SEQUENCE

THE CHART SHOWN BELOW SHOWS "TYPICALLY" ALLOWED CAPACITY STEPS FOR VARIOUS "TYPICAL" OUTDOOR AMBIENT TEMPERATURE RANGES.							
ALL ALLOWED STEPS	UP TO 15°F	ABOVE 15° TO 25°F	ABOVE 25° TO 33°F	ABOVE 33° TO 43°F	ABOVE 43° TO 50°F	ABOVE 50° TO 75°F	ABOVE 75°F
RESISTANCE	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED
COMB. 2-2-1	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED
COMB. 2-1-1	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED
COMB. 2-1-0	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED
COMB. 0-2-0	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED
COMB. 0-1-0	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED
OFF	ONLY BLACKENED IN BOXES ARE ALLOWED FOR THE SHOWN TEMPERATURE RANGES.	0-0 MEANS 1 PRIMARY CYLINDER; 0-2-0 MEANS BOTH PRIMARY CYLINDERS; 2-1-0 MEANS 2 BOOSTER CYLS, 1 PRIMARY CYL. & NO ECONOMIZER; 2-1-1 ADDS THE ECONOMIZER; 2-2-1 ADDS THE SECOND PRIMARY CYLINDER.					

BSHP-30 COOLING CAPACITY, BTU'S PER HOUR



F/G. 8

5

## COOLING CONDITIONS

### BOOSTED AIR SOURCE HEAT PUMP TYPICAL OPERATING SEQUENCE

THE CHART SHOWN BELOW SHOWS "TYPICALLY" ALLOWED CAPACITY STEP VARIOUS "TYPICAL" OUTDOOR AMBIENT TEMPERATURE RANGES.

ALL ALLOWED STEPS	ABOVE 105° TO 125°F	ABOVE 85° TO 105°F	60°F. TO 85°F
	(MANUAL)		
COMB. 2-2-1		NOT ALLOWED	NOT ALLOWED
		(MANUAL)	
COMB. 2-2-0			NOT ALLOWED
			(MANUAL)
COMB. 0-2-0			
COMB. 0-1-0	NOT ALLOWED		
OFF			

ONLY BLACKENED IN BOXES ARE ALLOWED FOR THE SHOWN TEMPERATURE RANGES.

0-1-0 MEANS 1 PRIMARY CYLINDER; 0-2-0 MEANS BOTH PRIMARY CYLINDERS; 2-2-0 MEANS 2 BOOSTER CYLS., 2 PRIMARY CYL. & NO ECONOMIZER; 2-2-1 ADDS THE ECONOMIZER.

(MANUAL) MEANS THAT THE OPERATING STEP SHOWN MUST BE CALLED MANUALLY FOR THE SHOWN OPERATING TEMPERATURE RANGE.

*FIG. 9*